



A.D. 1858, 18th SEPTEMBER. N° 2111.

S P E C I F I C A T I O N

OF

THOMAS VICARS, SENIOR, THOMAS
VICARS, JUNIOR, THOMAS ASHMORE,
AND JAMES SMITH.

SMOKE CONSUMING FURNACES OR
CHAUFFERS.

L O N D O N :

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1859.



A.D. 1858, 18th SEPTEMBER. N° 2111.

Smoke Consuming Furnaces or Chauffers.

LETTERS PATENT to Thomas Vicars, senior, Thomas Vicars, junior, and Thomas Ashmore, Engineers, and James Smith, Baker, all of Liverpool, in the County Palatine of Lancaster, for the Invention of “**IMPROVEMENTS FOR THE CONSUMPTION OF SMOKE IN MOVEABLE FURNACES OR CHAUFFERS FOR HEATING BAKERS’ AND OTHER LIKE OVENS.**”

Sealed the 11th February 1859, and dated the 18th September 1858.

PROVISIONAL SPECIFICATION left by the said Thomas Vicars, senior, Thomas Vicars, junior, Thomas Ashmore, and James Smith at the Office of the Commissioners of Patents, with their Petition, on the 18th September 1858.

- 5 We, THOMAS VICARS, senior, THOMAS VICARS, junior, and THOMAS ASHMORE, Engineers, and JAMES SMITH, Baker, all of Liverpool, in the County Palatine of Lancaster, do hereby declare the nature of the said Invention for “**IMPROVEMENTS FOR THE CONSUMPTION OF SMOKE IN MOVEABLE FURNACES OR CHAUFFERS FOR HEATING BAKERS’ AND OTHER LIKE OVENS,**” to be as follows:—
- 10 The box or ash-pit of the chauffer of our Invention is surrounded by air passages, which supply air that passes between a shell or box that surrounds the chauffer or fire-box; this outer shell is about half the height of the chauffer.

The air ascends along the outer sides of the chauffer and mingles at the top
15 with the gases from the fire, and thus prevents smoke. In the chauffer end

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of the pipe that supplies air to the furnace there is a hanging damper opened by a rod within the pipe, extending its entire length to the outer end, and enables the baker to regulate the air admission without interfering with the supply to the ash-pit. The chauffer may work on small wheels in the air passages to facilitate its movement to various parts of the oven. 5

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Thomas Vicars, senior, Thomas Vicars, junior, Thomas Ashmore, and James Smith in the Great Seal Patent Office on the 16th March 1859.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, THOMAS 10
VICARS, senior, THOMAS VICARS, junior, and THOMAS ASHMORE, Engineers;
and JAMES SMITH, Baker; all of Liverpool, in the County Palatine of Lancaster,
send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters
Patent, bearing date the Eighteenth day of September, in the year of our Lord 15
One thousand eight hundred and fifty-eight, in the twenty-second year of Her
reign, did, for Herself, Her heirs and successors, give and grant unto us,
the said Thomas Vicars, senior, Thomas Vicars, junior, Thomas Ashmore, and
James Smith, Her special licence that we, the said Thomas Vicars, senior,
Thomas Vicars, junior, Thomas Ashmore, & James Smith, our executors, 20
administrators, and assigns, or such others as we, the said Thomas Vicars,
senior, Thomas Vicars, junior, Thomas Ashmore, & James Smith, our
executors, administrators, and assigns, should at any time agree with, and no
others, from time to time and at all times thereafter during the term therein
expressed, should and lawfully might make, use, exercise, and vend, within 25
the United Kingdom of Great Britain and Ireland, the Channel Islands,
and Isle of Man, an Invention for "IMPROVEMENTS FOR THE CONSUMPTION OF
SMOKE IN MOVEABLE FURNACES OR CHAUFFERS FOR HEATING BAKERS' AND OTHER
LIKE OVENS," upon the condition (amongst others) that we, the said Thomas
Vicars, senior, Thomas Vicars, junior, Thomas Ashmore, & James Smith, our 30
executors or administrators, by an instrument in writing under our, or
their, or one of their hands and seals, should particularly describe and
ascertain the nature of the said Invention, and in what manner the same
was to be performed, and cause the same to be filed in the Great Seal Patent
Office within six calendar months next and immediately after the date of the 35
said Letters Patent.

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NOW KNOW YE, that we, the said Thomas Vicars, senior, Thomas Vicars, junior, Thomas Ashmore, & James Smith, do hereby declare the nature of our said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 Our said improvements refer mainly to certain peculiarities in the mechanical construction of the description of moveable furnaces called “chauffers,” which are principally used for the heating of bakers’ and other like ovens, but have the objectionable property of making smoke when bituminous fuel is used for consumption therein, which by means of our said Invention we prevent; and
10 for the better understanding of the same we will now proceed to detail the particulars thereof, reference being had to the Drawings hereunto annexed, in which the same letters indicate like parts throughout.

DESCRIPTION OF THE DRAWINGS.

Figure 1 is a longitudinal vertical section; Figure 2 is a transverse section
15 through the line *a, b*; and Figure 3 is a plan. A is the chauffer or receptacle for the fire, having an external shell or box *c*; B, the ash-place; C, the air-chamber of our introduction, affording air passages, extending half-way or thereabouts up the sides of the fire-box, regulated by the valve D; E, valve rods, with F, forked rods to work the same; *d, d, d*, being air passages, and
20 G is the usual chauffer pipe, which protruding out of the oven door is also used for moving the chauffer about on its wheels H, H, to heat the oven equably.

It will thus be observed that the improved chauffers of our Invention have the box or ash-pit surrounded by the air passages *d, d, d*, which supply air
25 that passes between a shell or box *c*, that surrounds the chauffer or fire-box, and is situated at or about half the height of the same. The air ascending along the outer sides of the chauffer, mingles at the top of it with the gases eliminated by the fuel during combustion, and by such supply and distribution of the air prevents the formation of smoke. In the chauffer end of the pipe that
30 supplies air to the furnace there is a hanging damper or valve D, opened by a rod within the pipe G, extending its entire length to the outer end to enable the workman to regulate the admission of air without interfering with the supply to the ash-pit. The chauffer may be worked on small wheels H in the air passages to facilitate its movement to various parts of the oven.

35 Having thus fully described our said Invention, we desire it to be understood that we do not restrict ourselves to any precise dimensions or materials; but what we do claim as our Invention is, the application of side air passages with valves arranged to afford a regulated supply of air to chauffers and like

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moveable furnaces used for heating ovens, to consume or prevent the smoke usually occasioned by the use of bituminous fuel, as described.

In witness whereof, I, the said Thomas Vicars, junior, on behalf of myself and the said Thomas Vicars, senior, Thomas Ashmore, and James Smith, have hereunto set my hand and seal, this Nineth day of 5 March, in the year of our Lord 1859.

THOMAS VICARS, JUN^R. (L.S.)

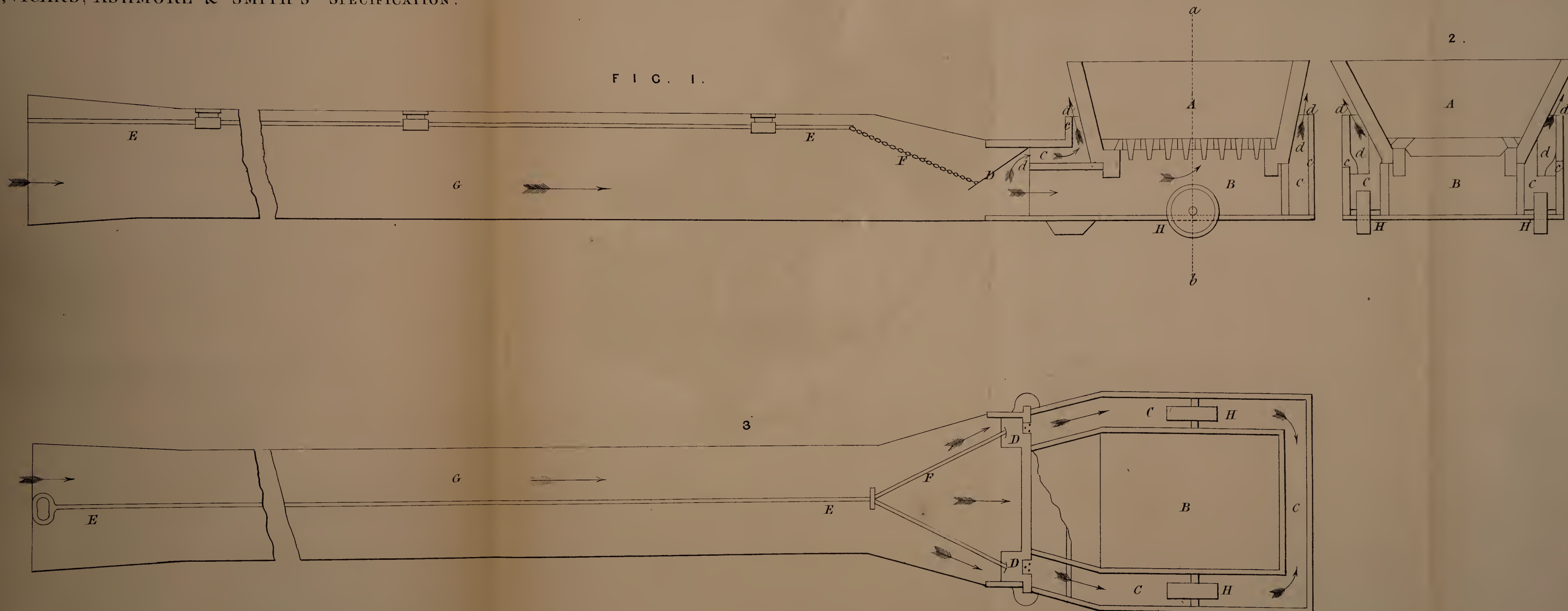
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VICARS, VICARS, ASHMORE & SMITH'S SPECIFICATION .

(1 SHEET .)

F I C . I .



The filed drawing is not colored.

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